Publications

Updated 01.28.20

Books

Hamada, M.S., Wilson, A.G., Reese, C.S., and Martz, H.F., "Bayesian Reliability," Springer (2008). More information at http://www.bayesianreliability.com.

Wu, C.F.J. and **Hamada, M.S.**, "Experiments: Planning, Analysis and Parameter Design Optimization," John Wiley and Sons, Inc. (2000).Won the John Wiley and Sons 2000 Award in Statistics and Probability for excellence and innovation. Also (2009). More information at http://www.isye.gatech.edu/~jeffwu/book/.

Discussion and Award Winning Papers

J.I. Abes, **M.S. Hamada** and C.R. Hills. Comparing methods for assessing reliability uncertainty based on pass/fail data collected over time. Quality Engineering, 30, 694-700 (2018). **Won the 2018-2019 Quality Engineering Best Reliability Paper Award**.

M.S. Hamada. Bayesian analysis of step-stress accelerated life tests and its use in planning. Quality Engineering, 27, 276-28 (2015). **Won the 2015-2016 Quality Engineering Best Reliability Paper Award**.

R.R. Picard, **M.S. Hamada**, G.S. Hemphill and R.E. Hackenberg. Accounting for nonrandom sampling in nonlinear regression. Quality Engineering, 27, 168-176 (2015). **Won the 2015 Soren Bisgaard Award**.

Graves, T., **Hamada, M.**, Booker, J., Decroix, M., Chilcoat, K. and Bowyer, C., "Estimating a Proportion Using Stratified Data Arising from Both Convenience and Random Samples," Technometrics, 49, 164-171 (2007). **Won the 2007 Frank Wilcoxon Prize**.

Hamada, M.S. and Sitter, R., "Statistical Research: Some Advice to Beginners," The American Statistician," 58, 93-101, discussion and response, 58, 196-202 (2004).

Johnson, V., Graves, T., **Hamada, M.** and Reese, C.S., "A Hierarchical Model for Estimating the Reliability of Complex Systems (with discussion)," Bayesian Statistics 7, Oxford University Press, Eds. J.M. Bernardo, M.J. Bayarri, J. Berger, A.P. Dawid, D. Heckerman, A.F.M. Smith, and M. West, 199-213 (2003).

Hamada, M.S. and Balakrishnan, N., "Analyzing Unreplicated Factorial Experiments: A Review with Some New Proposals (with discussion)," Statistica Sinica, 8, 1-41 (1998).

Hamada, M.S. and Wu, C.F.J., "Analyzing Designed Experiments with Complex Aliasing, Journal of Quality Technology, 24, 30-37 (1992). **Won the 1992 ASQC Brumbaugh Award**.

Hamada, M.S. and Wu, C.F.J., "A Critical Look at Accumulation Analysis and Related Methods," (with discussion) Technometrics, 32, 119-162 (1990). **Won the 1990 Frank Wilcoxon Prize**.

Other Papers

M.S. Hamada, Quality quandaries: an incomplete taxonomy of Bayesian statistical models with examples from industrial statistics applications. Los Alamos National Laboratory Technical Report LA-UR-19-20183 (2019). Accepted by Quality Engineering.

M.S. Hamada and B.P. Weaver, Quality quandaries: on Bayesian prediction intervals and bounds for finite populations. Los Alamos National Laboratory Technical Report LA-UR-19-24501 (2019). Accepted by Quality Engineering.

M.S. Hamada, B.M. Jaramillo and C.H. Chiao, A note on the Bayesian analysis of experiments with correlated multiple responses using a matrix-logarithmic covariance model. Quality and Reliability Engineering International, 35, 2506-2511 (2019).

M.S. Hamada and B.P. Weaver, Quality quandaries: statistical thinking for adding more sensors in a monitoring application. Quality Engineering, 32, 124-130 (2020).

M.S. Hamada and S. Sintay, Quality quandaries: assessing correlation to evaluate performance of a two component system and its impact on specifying separate production requirements. Quality Engineering, 31, 639-644 (2019).

M.S. Hamada, J.T. Mang, L.H. Hoff, Quality quandaries: should estimates be analyzed instead of the raw data? Quality Engineering, 31, 499-504 (2019).

M.S. Hamada and B.P. Weaver, Quality quandaries: accounting for measurement error in analyzing data. Quality Engineering, 31, 349-353 (2019).

C.M. Anderson-Cook and M.S. Hamada, Quality quandaries: Incorporating practical constraints into a designed experiment. Quality Engineering, 30, 534-541 (2018).

A.J. Hamada, C.A. Hamada, M. Hamada and M.S. Hamada, Quality quandaries: experiencing the practice of statistics with simple experiments. Quality Engineering, 30, 776-782 (2018).

S. Culp, J. Chen, K.J. Ryan and M.S. Hamada. Random effects models for repeatability and reproducibility of ordinal measurements. Technometrics, 60, 545-556 (2018).

M.L. Fugate, M.S. Hamada and B.P. Weaver. Quality quandaries: Predicting a population of curves. Quality Engineering, 30, 351-356 (2018).

M.S. Hamada and B.P. Weaver. Quality quandaries: uses of simulation. Quality Engineering, 30, 163-166 (2018).

B.P. Weaver, M.S. Hamada, A.G. Wilson and J.E. Bakerman. Bayesian degradation data demonstration tests. Quality Reliability Engineering International, 33, 2699-2709 (2017).

M.L. Fugate, M.S. Hamada and B.P. Weaver. Analyzing degradation data with a random effects semiparametric regression model. Quality Engineering, 29, 358-365 (2017).

D. Collins, B.P. Weaver, B.P., and M.S. Hamada. Panning for gold: Enhancing the precision of sensitivity test data. Statistical Analysis and Data Mining, 10, 166-181 (2017).

M.W. Vance, K.J. Margevicius, M.S. Hamada. Quality quandaries: combining engineering and statistics to assess the probability of an event. Quality Engineering, 29, 547-550 (2017).

E.V. Thomas, J.R. Lewis, C.M. Anderson-Cook, T. Burr, M.S. Hamada, Selecting an informative/discriminating multivariate response for inverse prediction. Journal of Quality Technology, 49, 228-243 (2017)

K.J. Ryan, M.S. Hamada, and S.B. Vardeman. Estimating a service life distribution based on production counts and a failure database. Journal of Quality Technology, 49, 272-285 (2017).

E.J. Kelly, M.S. Hamada, S.A. Vander Wiel and R.D. Ryne. Optimal inspection of a finite population. Quality Engineering, 29, 254-261 (2017).

M.S. Hamada, R.J. MacKay, S.H. Steiner and C.S. Reese. Analyzing fractional factorial experiments with models that distinguish between replicates and repeats. Quality and Reliability Engineering International, 33, 657-668 (2017).

H.A. Chipman and M.S. Hamada. Using Bayesian variable selection to analyze regular resolution IV two-level fractional factorial designs. Quality and Reliability Engineering International, 33, 493-502 (2017).

C.M. Anderson-Cook, M.S. Hamada, L.M. Moore, J.R. Wendelberger. Statistical mentoring at various stages of a career. The American Statistician, 71, 6-14 (2017).

B.P. Weaver and M.S. Hamada. Quality quandaries: a gentle introduction to Bayesian statistics. Quality Engineering, 28, 508-514 (2016).

M.S. Hamada. A Bayesian approach to multivariate measurement system assessment. Journal of Quality Technology, 48, 246-252 (2016).

M.S. Hamada, B.P. Weaver, C. Schmidt. Quality quandaries: impact of only below limit of detection data. Quality Engineering, 28, 358-364 (2016).

M.S. Hamada and K.J. Margevicius. An application of a zero-inflated lifetime distribution with multiple and incomplete data sources. Quality and Reliability Engineering International, 32, 2883-2887 (2016).

C.M. Anderson-Cook, M.S. Hamada, T. Burr. The impact of response measurement error on the analysis of designed experiments. Quality and Reliability Engineering International, 32, 2415-2433 (2016).

C.M. Anderson-Cook, T. Burr, M.S. Hamada, C. Ruggiero, and E.V. Thomas. Design of experiments and data analysis challenges in calibration for forensics applications. Chemometrics, 149, 107-117 (2015).

T.L. Graves and M.S. Hamada. A note on incorporating simultaneous multi-level failure time data in system reliability assessments. Quality and Reliability Engineering International, 32, 1127-1135 (2016).

C.M. Anderson, T. Burr, M.S. Hamada, and E.V. Thomas. Statistical analysis for nuclear forensics experiments. Statistical Analysis and Data Mining, 8, 365-377 (2015).

K.J. Ryan and M.S. Hamada. Qualification testing with paired within-part samples. Quality Engineering, 27, 473-476 (2015).

M.S. Hamada and K.J. Ryan. Combined analysis of overlapping stratified random sample and simple random sample data. Quality and Reliability Engineering International, 32, 309-314 (2016).

M.S. Hamada and J.H. Burkhardt. Impact on quality activities of measurement systems meeting an L:1 rule. Quality and Reliability Engineering International, 32, 1021-1028 (2016).

J. Gattiker, M.S. Hamada, D. Hidgon, M. Schonlau, and W.J. Welch. Using a Gaussian process as a nonparametric regression model. Quality and Reliability Engineering International, 32, 673-680 (2016).

T. Burr, M.S. Hamada, L. Ticknor, J. Sprinkle. Hybrid statistical testing for nuclear material accounting data and/or process monitoring data in nuclear safeguards. Energies, 8, 501-528 (2015).

M.S. Hamada, B.L. Mitchell, and C.T. Necker. On uncertainty of a proportion from a stratified random sample of a small population. Journal of Applied Statistics, 42, 828-833 (2015).

C.M. Anderson-Cook, T. Burr, M.S. Hamada, B. Rutherford, E. Thomas. Overview of statistical challenges in experimental design and analysis for nuclear forensics. Proceedings of the 55th annual meeting of the Institute of Nuclear Materials Management, Atlanta, GA, July 13-18, 2014 (2014).

M.S. Hamada, D.M. Higdon, J. Abes, C. Hills, and A.M. Peters. Illustrating how science can be incorporated into a nonlinear regression model. Quality Engineering, 27, 416-423 (2015).

M.S. Hamada and K.J. Ryan. The analysis of misclassified ordinal data from designed experiments.Quality and Reliability Engineering International, 32, 223-229 (2016).

M.S. Hamada and K.J. Ryan. Combined analysis of overlapping stratified random sample and simple random sample data. Quality and Reliability Engineering International, 32, 309-314 (2016).

T. Burr and M.S. Hamada. Analyzing censored data in the analysis of multiplicative gauge R & R studies. Accreditation and Quality Assurance, 19, 85-90 (2014).

T. Burr, M.S. Hamada, L. Ticknor and B.P. Weaver. Model selection and change detection for a time-varying mean in process monitoring. Nuclear Instruments and Methods in Physics Research A, 751, 79-87 (2014).

M.S. Hamada, G.S. Hemphill and R.E. Hackenberg. Combined analysis of accelerated fixed stress lab and varying stress field data. Quality Engineering, 27, 139-143 (2015).

M.S. Hamada. Impact and assessment of measurement systems that meet the 4:1 rule. Quality and Reliability Engineering International, 31, 917-921 (2015).

R. Lekivetz, R. Sitter, D. Bingham, M.S. Hamada, L.M. Moore and J. Wendelberger. On algorithms for obtaining orthogonal and nearly-orthogonal Arrays. Journal of Quality Technology, 47, 2-13 (2015).

M.S. Hamada and J.I. Abes. Statistical tests to validate predictive models.Quality and Reliability Engineering International, 31, 1761-1768 (2015).

M.S. Hamada and A.A. Robertson. Inverting tolerance bounds for confidence on a specified proportion of a population meeting a specification. Journal of Quality Technology, 27, 209–219 (2015).

T. Burr and M.S. Hamada. Bayesian updating of material balances covariance matrices using training data, International Journal of Prognostics and Health Management, 5, 1, 006 (13 pages) (2014).

T. Burr and M.S. Hamada. A multiplicative model for gauge R & R studies. Quality Reliability Engineering International, 31, 801–809 (2015).

M.S. Hamada and R.L. Warr. Analyzing deficient response summaries from designed experiments, Quality Engineering, 26, 440–449 (2014).

C.D. Lin, C.M. Anderson-Cook, M.S. Hamada and L.M. Moore. Using genetic algorithms to design experiments: a review. Quality and Reliability Engineering International, 31, 155–167 (2015).

T. Burr, M.S. Hamada, K. Myers, N. Hengartner, R. Picard. Data mining in radiation portal monitoring. International Journal of Research and Reviews in Applied Science, 17, November, 1–8 (2013).

R. Bierbaum, K. Diegert, M.S. Hamada, A. Huzurbazar and A. Robertson. Using statistical methods to assess a surveillance program.Quality Engineering, 26, 416–423 (2014).

T. Burr and M.S. Hamada. Smoothing and time series modeling of NMA data for protracted diversion detection. Nuclear Science and Engineering, 177, 307–320 (2014).

M.S. Hamada, A.G. Wilson, B.P. Weaver, R.W. Griffiths and H.F. Martz. Bayesian binomial assurance tests for system reliability using component data. Journal of Quality Technology, 46, 24–32 (2013).

S. Vardeman, M.S. Hamada, T. Burr, M. Morris, J. Wendelberger, M. Jobe, L. Moore and H. Wu. An introduction to statistical issues and methods in metrology for physical science and engineering. Journal of Quality Technology, 46, 33–62 (2013).

T. Burr, M.S. Hamada, J. Howell, M. Skurikhin, L. Ticknor and B. Weaver. Estimating alarm thresholds for process monitoring data under different assumptions about the data generating mechanism, Science and Technology of Nuclear Installations, Article ID 705878, 18 pages, DOI: 10.1155/2013/705878 (2013).

M.S. Hamada, E. Kelly and T. Buxton. Understanding the rule of 7: statistical properties for various sample sizes. Quality Engineering, 26, 285–289 (2014).

T. Burr and M.S. Hamada. Revisiting statistical aspects of nuclear material accounting. Science and Technology of Nuclear Installations, Article ID 961360, 15 pages, DOI:10.1155/2013/961360 (2013).

T. Burr, M.S. Hamada, K. Myers and M. Shurikhin. Point source detection using gamma ray spectra in radiation portal monitoring. Journal of Quality Technology, 45, 285–296 (2013).

T. Burr and M.S. Hamada., Data analysis in support of radiation portal monitoring. International Journal of Research and Reviews in Applied Sciences, 14, 1–16 (2013).

T. Burr and M.S. Hamada. Impacts of model fidelity on simulated gamma spectra in estimating nuclear safeguards systems performance. International Journal of Research and Reviews in Applied Sciences, 11, 10–30 (2012).

C.M. Anderson-Cook and M.S. Hamada. A discussion of “Screening strategies in the presence of interactions” by D. Dragulgic, D.C. Woods, A.M. Dean, S.M. Lewis and A.E. Vine. Technometrics, 56, 16–19 (2014).

T. Burr and M.S. Hamada. Case study in combining physical and computer experiments. Global Journal of Science Frontiers, 12, 1–7 (2012).

Burr, T., Hamada, M.S., Skurikhin, M., and Weaver, B., "Pattern Recognition Options to Combine Process Monitoring and Material Accounting Data In Nuclear Safeguards," Statistics Research Letters, 1, 6–31 (2012).

Michalak, S., Hamada, M.S., and Hengartner, N., "Analysis of Interval-censored Data with Random Unknown Endpoints: an Application to Soft Error Rate Estimation," Journal of the Royal Statistical Society C, Series C, 62, 473–486 (2013).

Hamada, M.S., and Borror, C., "Analysis of Unreplicated Gauge R & R Studies," Quality Engineering, 24, 543–551 (2012).

Hamada, M.S., and Burr, T., "Moving Neutron Source Detection in Radiation Portal Monitoring," Technometrics, 55, 296–308 (2013).

Weaver, B.P., Hamada, M.S., Vardeman, S.B., and Wilson, A.G., "A Bayesian Approach to Measurement System Assessment," Quality Engineering, 24, 486–500 (2012).

Burr, T., Croft, S., Hamada, M.S., Vardeman, S.B., and Weaver, B.P., "Rounding Error Effects in the Presence of Underlying Measurement Error," Accreditation and Quality Assurance, DOI 10.1007/s00769-012-0902-6 (2012).

Hamada, C.A., and Hamada, M.S., "Illustrating the Practice of Statistics as a Stepping Stone to Statistical Engineering," Quality Engineering, 24, 184–192 (2012).

Hamada, Lohr, S., Hamada, C.A., and Burr, T., " Estimating a Proportion from Repeated Sampling of a Growing Population: an Application of Survey Sampling Methodology," Quality Engineering, 25, 108-117 (2013).

Burr, T., Hamada, M.S., Howell, J., and Suzuki, M., "Loss Detection Results on Simulated Tank Data Modified by Realistic Effects," Journal of Nuclear Science and Technology, 49, 209-221 (2012).

Burr, T., and Hamada, M.S., "Finding Test Statistic Thresholds Using Simulation and Model Fitting with an Application to Radiation Detection," Quality Engineering, 24, 400-403 (2012).

Bhat, K.S., Birdsell, S., and Hamada, M.S., "The Interplay Between Science and Statistics in Modeling Stress-strain Curve Data," Quality Engineering, 25, 11-22 (2012).

Picard, R., Burr, T., and Hamada, M.S., "Threshold Determination for Radiation Portal Monitoring," Technometrics, 55, 94-102 (2013).

Robinson, T.J., Pintar, A.L., Anderson-Cook, C.M., and Hamada, M.S., "A Bayesian Approach to the Analysis of Split-plot Combined and Product Arrays and Optimization in Robust Parameter Design," Journal of Quality Technology, 44, 304-320 (2012).

Burr, T., and Hamada, M.S., "Simultaneous Estimation of Computer Model Parameters and Model Bias," Applied Radiation and Isotopes, 70, 1675-1684 (2012).

Burr, T., and Hamada, M.S., "Strengthened Nuclear Safeguards: a Statistical View in the Context of Combining Process Monitoring and Nuclear Material Accounting Data," Journal of Nuclear Materials Management, 40, 115-129 (2012).

Burr, T., Budlong-Sylvester, K., Demuth, S., Hamada, M.S., Howell, J., and Suzuki, M.,"Estimating Alarm Thresholds and the Number of Components in Mixture Distributions," Nuclear Institute and Methods in Physics Research, A, 40(4), 115-129 (2012).

Lu Lu, C.M. Anderson-Cook, B.S. Otieno, M.S. Hamada, "Metrics, Design and Analysis of Simulation Studies for Evaluating Directional Data Methods," Journal of Statistical Theory and Applications, 10, 115-142 (2011).

Reese, C.S., A.G. Wilson, J. Guo, M.S. Hamada and V. Johnson, "A Bayesian Model for Integrating Multiple Sources of Lifetime Information in System Reliability Assessments," Journal of Quality Technology, 43, 127-141 (2011).

Ryan, K.J., M.S. Hamada and C.S. Reese, "A Bayesian Hierarchical Power Law Process Model for Supercomputer Reliability," Journal of Quality Technology, 43, 209-223 (2011).

Burr, T., M.S. Hamada, J. Song and M. Wolinsky, "Special Topics in Pattern Recognition with Applications in Nonproliferation," Perspectives in Pattern Recognition, Fournier, M.D., Ed., Nova Science Publishers, Inc. (2011).

Burr, T., S. Suzuki, J. Howell, C.E. Longo, and M.S. Hamada, "Signal Estimation and Change Detection in Tank Data for Nuclear Safeguards," Nuclear Instrumentation and Methods in Physics Research, A, 640, 200-221 (2011).

Hamada, M.S., A.V. Huzurbazar, S. Vander Wiel and A.G. Wilson, "Assessing the Risks of Sampling Rates for Surveillance," Quality Engineering, 23, 242-252 (2011).

Izraelevitz, A,. C.M. Anderson-Cook and M.S. Hamada, "Illustrating the Use of Statistical Experimental Design and Analysis for Multiresponse Prediction and Optimization," Quality Engineering, 23, 265-277 (2011).

Burr, T., M.S. Hamada, T.L. Cremers, B.P. Weaver, J. Howell, S. Croft, S.B. Vardeman, "Measurement Error Models and Variance Estimation in the Presence of Rounding Error Effects," Accreditation and Quality Assurance, 16:347-359, DOI 10.1007/s00769-011-0791-0 (2011).

Burr, T,. M. Hamada, N. Hengartner, "Impact of Spectral Smoothing on Gamma Radiation Portal Alarm Probabilities," Applied Radiation and Isotopes, 69, 1436-1446 (2011).

Burr, T,. M.S. Hamada and J. Howell, "Modeling and Simulation for Nuclear Material Accounting and Process Monitoring for Nuclear Safeguards," International Journal of Research and Reviews in Applied Sciences, 8, 270-282 (2011).

Burr, T., Hamada, M.S., Graves, T.L., and Myers, S., "Augmenting Real Data with Synthetic Data: An Application in Assessing Radio-Isotope Identification Algorithm," *Quality and Reliability Engineering International,* 25, 899-911 (2009).

Graves, T.L., Anderson-Cook, C.M., and Hamada, M.S., "Reliability Models for Almost-Series and Almost-Parallel Systems," *Technometrics*, 52, 160-171 (2010).

Hamada, M.S., and Higdon, D.M., "Illustrating the Future Prediction of Performance Based on Computer Code, Physical Experiments, and Critical Performance Parameter Samples," *Quality Engineering*, 21, 05-415 (2009).

Vardeman, S., Wendelberger, J., Burr, T., Hamada, M.S., Moore, L.M., Jobe, J.M., Morris, M., and Wu, H., "Elementary Statistical Methods and Measurement Error," *The American Statistician*, 64, 46-51 (2010).

Graves, T.L., and Hamada, M.S., "Assessing System Reliability and Allocating Resources: A Bayesian Approach that Integrates Multi-Level Data," *International Journal of Quality, Statistics, and Reliability,* http://www.hindawi.com/journals/ijqsr/2009/754896.html (2009).

Hamada, C.A., and Hamada, M.S., "All-Subsets Regression Under Effect Heredity Restrictions for Experimental Designs with Complex Aliasing," *Quality and Reliability Engineering International* 26, 75-81 (2010).

Burr, T., and Hamada, M.S., "Radio-Isotope Identification Algorithms for NaI Gamma Spectra," *Algorithms*, 2, 339-360 (2009).

Wendelberger, J., Moore, L.M., and Hamada, M.S., "Making Tradeoffs in Designing Scientific Experiments: A Case Study with Multi-level Factors," *Quality Engineering*, 21, 143-155 (2009).

Anderson-Cook, C., Graves, T.L., and Hamada, M.S., "Resource Allocation for Reliability of a Complex System with Aging Components," *Quality and Reliability Engineering International* 25, 481-494 (2009).

Robinson, T., Anderson-Cook, C., and Hamada, M.S., "Bayesian Analysis of Split-Plot Experiments with Non-Normal Responses for Evaluating Non-Standard Performance Criteria," *Technometrics*, 51, 56-65 (2009).

Graves, T., Hamada, M.S., Klamman, R.M., Koehler, A. and Martz, H.F., "Using Simultaneous Higher-level and Partial Lower-level Data in Reliability Assessments," *Reliability Engineering and System Safety*, 93, 1273-1279 (2008).

Weaver, B.P., and Hamada, M.S., "A Bayesian Approach to the Analysis of Industrial Experiments: an Illustration with Binomial Count Data," *Quality Engineering*, 20, 269-280 (2008).

Reese, C.S., Deininger, P., Hamada, M.S., and Krabill, R., "Exploring the Statistical Advantages of Nondestructive Evaluation Over Destructive Testing," *Journal of Quality Technology*, 40, 259-267 (2008).

E.J. Powell, M.S. Hamada, L.M. Moore and D.R. Powell, Distributions for case mortality rate based on historic pandemic influenza death rates. Proceedings of the 2008 Joint Statistical Meetings Section on Statistics in Epidemiology, 2691-2698 (2008).

Steiner, S., Hamada, M., Giddings, B., Kutsyy, V., Mosesova, S. and Salloum, G.M., "A Robust Bubble Solution Via Mixture Experiments," Journal of Statistical Education, 15, 1 (2007). www.amstat.org/publications/jse/v15n1/steiner.html

Graves, T., Hamada, M.S., Klamman, R.M., Koehler, A. and Martz, H.F., "A Fully Bayesian Approach for Combining Multi-level Information in Multi-state Fault Tree Quantification ," Reliability Engineering and System Safety, 92, 1476-1483 (2007).

Anderson-Cook, C., Graves, T., Hamada, M.S., Hengartner, N., Johnson, V., Reese, C.S. and Wilson, A.G., "Bayesian Stockpile Reliability Methodology for Complex Systems with Application to a Munitions Stockpile," Military Operations Research Journal, 12, 25-37 (2007).

Wilson, A.G., Graves, T., Hamada, M.S. and Reese, C.S., "Advances in Data Combination and Collection for System Reliability Assessment," Statistical Science, 21, 514-531 (2006).

Booker, J., Ross, T., Hamada, M.S., Reardon, B., Dolin, R., Faust, C. and Najera, L., "Engineering Index: an Engineering Certification Qualification Metric," Military Operations Research Journal, 11, 27-44 (2006).

Coons, J.E., McKay, M.D. and Hamada, M.S., "A Bayesian Analysis of Compression Set and Stress-Strain Behavior in a Thermally Aged Silicone Foam," Polymer Degradation and Stability, 91, 1824-1836 (2006).

Hamada, M.S., Martz, H.F., Koehler, A. and Berg, E., "Optimizing the Availability of a Buffered Industrial Manufacturing Process," Reliability Engineering and System Safety, 91, 1039-1048 (2006).

Graves, T.L. and Hamada, M.S., "Biased Reduced Sampling: Detectability of an Attribute and Estimation of Prevalence," Quality and Reliability Engineering International, 22, 385-392 (2006).

Graves, T.L. and Hamada, M.S., "Bayesian Methods for Assessing System Reliability: Models and Computation," chapter in Modern Statistical and Mathematical Methods in Reliability, World Scientific Publishing Company (2005).

Graves, T.L. and Hamada, M.S., "Making Inferences with Indirect Measurements," Quality Engineering, 17, 555-559 (2005).

Hamada, M.S., "Using Degradation Data to Assess Reliability," Quality Engineering, 17, 615-620 (2005).

Hamada, M.S., Martz, H.F. and Steiner, S., "Accounting for Mixing Errors in Analyzing Mixture Experiments," Journal of Quality Technology, 37, 139-148 (2005).

Reese, C.S., Hamada, M.S. and Robinson, D., "Assessing System Reliability by Combining Multilevel Data from Different Test Modalities," Quality Technology and Quantitative Management, 2, 177-188 (2005).

Hamada, M.S., Johnson, V., Moore, L.M. and Wendelberger J., "Bayesian Prediction Intervals and their Relationship with Tolerance Intervals," Technometrics, 46, 452-459 (2004).

Hamada, M.S., Martz, H., Reese, C.S., Graves, T., Johnson, V. and Wilson, A.G., "A Fully Bayesian Approach for Combining Multilevel Failure Information in Fault Tree Quantification and Optimal Follow-on Resource Allocation," Reliability Engineering and System Safety, 86, 297-305 (2004).

Reese, C.S., Wilson, A.G., Hamada, M.S. and Martz, H.F., "Integrated Analysis of Computer and Physical Experiments," Technometrics, 46, 153-164 (2004).

Wilson, A., Hamada, M.S. and Xu, M., "A Bayesian Approach for Determining Production Performance and Release Specifications in the Presence of Measurement Error," Journal of Quality Technology, 36, 193-206 (2004).

Hamada, M.S., "On Tolerance Interval Control Limits for Xbar, R and S Charts," Quality Engineering, 15:471-487 (2003).

Hamada, M.S., "The Advantages of Continuous Measurements Over Pass/Fail Data," Quality Engineering, 15:253-258 (2002-03).

Hamada, M.S., Pohl, A., Spiegelman, C. and Wendelberger, J., "A Bayesian Approach to Calibration Intervals and Properly Calibrated Tolerance Intervals," Journal of Quality Technology, 35:194-205 (2003).

Martz, H.F. and Hamada, M.S., "Uncertainty in Counts and Operating Time in Estimating Poisson Occurrence Rates," Reliability Engineering and System Safety, 80, 75-79 (2003).

Nair, V.N., Escobar L. and Hamada, M.S., "Design and Analysis of Experiments for Reliability Assessment and Improvement,"Mathematical Reliability: An Expository Perspective, Kluwer Academic Publishers, R. Soyer, T. Mazzuchi and N. Sinpurwalla (2003).

Wilson, A.G., Reese, C.S., Hamada, M.S. and Martz H.F., "Integrated Analysis of Computer and Physical Experimental Lifetime Data," Chapter in Mathematical Reliability; An Expository Perspective, Kluwer Academic Publishers, Eds. R. Soyer, T. Mazzuchi and N. Singpurwalla (2003).

Hamada, M.S., "Bayesian Tolerance Interval Control Limits for Attributes," Quality and Reliability Engineering International, 18, 45-52 (2002).

Chiao, C.H. and Hamada, M.S., "Experiments with Degradation Data for Improving Reliability and for Achieving Robust Reliability," Quality and Reliability Engineering International, 17, 333-344 (2001).

Chiao, C.H. and Hamada, M.S., "Analysis of Experiments with Correlated Multiple Responses," Journal of Quality Technology, 33, 451-465 (2001).

Hamada, M.S., "Coupling Bayesian Inference and Monte Carlo Methods in Error Propagation," Quality Engineering, 14, 293-299 (2001-02).

Hamada, M.S., Martz, H.M., Reese, C.S. and Wilson, A.G., "Finding Near-Optimal Bayesian Experimental Designs via Genetic Algorithms," The American Statistician, 55, 175-181 (2001).

Ye, K., M. Hamada and C.F.J. Wu, "A Step-down Length Method for Analyzing Unreplicated Factorial Designs," Journal of Quality Technology, 33, 140-152 (2001).

Hamada, M.S. and Weerahandi, S., "Measurement System Assessment Via Generalized Inference," Journal of Quality Technology, 32, 241-253 (2000).

Ye, K. and Hamada, M.S., "Critical Values of the Lenth Method for Unreplicated Factorial Designs," Journal of Quality Technology, 32, 57-66 (2000).

Dalal, S., Hamada, M.S. and Wang, T.J., "How to Improve Performance of Software Systems: A Methodology and a Case Study for Tuning Performance," Annals of Software Engineering, 8, 53-84 (1999).

Hamada, M.S., Martz, H.F., Koehler, A. and Berg, E., "Optimizing the Availability of a Buffered Industrial Manufacturing Process," Reliability Engineering and System Safety, 91, 1039-1048 (1999).

Hamada, M.S. and Nelder, J.A., "Generalized Linear Models for Quality-Improvement Experiments," Journal of Quality Technology, 29, 292-304 (1997).

Steiner, S. and Hamada, M.S., "Making Mixtures Robust to Noise Factors and Measurement Errors," Journal of Quality Technology, 29, 441-450 (1997).

Chipman, H., Hamada, M.S. and Wu, C.F.J., "A Bayesian Variable Selection Approach for Analyzing Designed Experiments with Complex Aliasing," Technometrics, 39, 372-381 (1997).

Chipman, H. and Hamada, M.S., "A Bayesian Approach for Analyzing Ordinal Data from Industrial Experiments," Technometrics, 38, 1-10 (1996).

H. Chipman and M. Hamada, Factor-based or effect-based modeling? implications for design. A discussion of ``Follow-up designs to resolve confounding in multi-factor experiments" by D. Meyer, D. Steinberg and G. Box. Technometrics, 38, 317-320 (1996).

M. Schonlau, M. Hamada and W.J. Welch, Nonparametric function-fitting to suggest nonlinear parametric models. 1995 Proceedings of the American Statistical Association Section on Physical and Engineering Sciences, 262-267 (1995).

M. Hamada and S.K. Tse, The existence of maximum likelihood estimates from designed experiments. Journal of Quality Technology, 28, 244–254 (1996).

Chiao, C.H. and Hamada, M.S., "Using Degradation Data from an Experiment to Achieve Robust Reliability for Light Emitting Diodes," Quality and Reliability Engineering International, 12, 89–94 (1996).

Tseng, S.T., Hamada, M.S. and Chiao, C.H., "Using Degradation Data to Improve Fluorescent Lamp Reliability," Journal of Quality Technology, 27, 363–369 (1995).

Hamada, M.S. and Wu, C.F.J., "Analysis of Censored Data from Fractionated Experiments: A Bayesian Approach," Journal of the American Statistical Association, 90, 467–477 (1995).

Meeker, W.Q. and Hamada, M.S., "Statistical Tools for Aiding the Rapid Development and Evaluation of Highly Reliable Products," IEEE Transactions on Reliability, 44, 187–198 (1995).

Hamada, M.S., "Using Statistically Designed Experiments to Improve Reliability and to Achieve Robust Reliability," IEEE Transactions on Reliability, 44, 206–215 (1995).

M. Hamada, Analysis of experiments for reliability improvement and robust reliability in Recent Advances in Life-Testing and Reliability, (N. Balakrishnan, Ed.), CRC Press: Boca Raton, 155–172 (1995).

M. Hamada and C.F.J. Wu, The treatment of related experimental factors by sliding levels. Journal of Quality Technology, 27, 45–55 (1995).

Gentleman, R., Hamada, M.S., Matthews, D.E. and Wilson, A.R., "Statistical Quality Control of HIV-1 ELISA Test Performance," Journal of the American Statistical Association, 89, 1200–1208 (1994).

Hamada, M.S., MacKay, R.J. and Whitney, J.B., "Continuous Process Improvement with Observational Studies, Journal of Quality Technology, 25, 77–84 (1993).

Taam, W. and Hamada, M.S., "Detecting Spatial Effects in Factorial Experiments: An Application in Integrated-Circuit Manufacturing," Technometrics, 35, 149–160 (1993).

M. Hamada, Reliability improvement via Taguchi's robust design. Quality and Reliability Engineering International, 9, 7–13 (1993).

M. Hamada, An explanation and criticism of minute accumulating analysis. Journal of Quality Technology, 24, 70–77 (1992).

M. Hamada and S.K. Tse, On estimability problems in industrial experiments with censored data. Statistica Sinica, 2, 381–391 (1992).

M. Hamada, The costs of using incomplete exponential data. Journal of Statistical Planning and Inference, 27, 317–324 (1991).

M. Hamada and C.F.J. Wu, Analysis of censored data from highly fractionated experiments. Technometrics, 33, 25–38 (1991).

M. Hamada, The costs of using incomplete response data for the exponential regression model. Communications in Statistics - Theory and Methods, 18, 5, 1691–1714 (1989).

M. Hamada and S.K. Tse, A note on maximum likelihood estimation in regression models using interval censored data. Journal of the Royal Statistical Society, Series B, 50, 293–296 (1988).

M. Hamada and C.F.J. Wu, Should accumulation analysis and related methods be used for industrial experiments? A discussion of “Testing in industrial experiments with ordered categorical data” by V.N. Nair. Technometrics, 28, 302–306 (1986).